



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,303	02/26/2002	Kiyoshi Honda	ASA-1068	2781
24956	7590	11/18/2003		
MATTINGLY, STANGER & MALUR, P.C. 1800 DIAGONAL ROAD SUITE 370 ALEXANDRIA, VA 22314			EXAMINER PATEL, HETUL B	
			ART UNIT	PAPER NUMBER
			2186	

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/082,303

Applicant(s)

HONDA ET AL.

Examiner

Hetul Patel

Art Unit

2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-12, 14-20 and 22-24 is/are rejected.
- 7) ☒ Claim(s) 5, 13 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 05.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. Claims 1-24 are presented for the examination.
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
3. The "Summary of the Invention" section should start at the line 23 on page 3 instead of at the line 18 on page 2 as disclosed in the current application.

Claim Objections

4. Claims 2, 10 and 18 are objected to because of the following informalities:
These claims should read as "...when it is judged that the received request should be executed by said first storage device" instead of "...when it is judged that the received request should be executed" as disclosed in this application.

Appropriate correction is required.

5. Claims 6, 14 and 22 are objected to because of the following informalities:
These claims should read as "...transfers the received request to said second storage device when it is judged that the received request should not be executed by said first storage device, based on cooperation control information which indicates a request to be executed by said second storage device,..." instead of "...transfers the received request to said second storage device when it is judged that the received request

should not be executed, based on cooperation control information which indicates a request to be executed by said first storage device,..." as disclosed in this application.

Appropriate correction is required.

6. Claims 7, 15 and 23 are objected to because of the following informalities:

These claims should read as "...transfers the received request to said second storage device when it is judged that said second storage device should execute the received request, based on cooperation control information which indicates a request to be executed by said second storage device,..." instead of "...transfers the received request to said second storage device when it is judged that said second storage device should execute the received request, based on cooperation control information which indicates a request to be executed by said first storage device,..." as disclosed in this application.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3, 8, 11, 16, 19 and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claims listed above

states "... the request includes the first identification information indicating a storage device that should execute the information processing, and ...", which is not taught/declared in the specification of this application. The specification discloses that the processor, means for executing information processing, executes the request based on the read request area information (address of the requested data) included in the read data request and the cooperation control information. So the claims listed above should state "... the request includes the address of the requested data, and ..." instead of "... the request includes the first identification information indicating a storage device that should execute the information processing, and ..." as disclosed in this application.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. The claims 2, 6-7, 10, 14-15, 18, 22 and 23 are generally narrative and indefinite, failing to conform with current U.S. practice. The last line of the each claim listed above is unclear, which states as "...and the received request". They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-2, 4, 6-7, 9-10, 12, 14-15, 17-18, 20 and 22-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Judd et al. (USPN: 5,768,623), hereinafter, Judd.

As per claims 1 and 9, Judd teaches a storage subsystem (see Fig. 3) comprising a plurality of storage devices (array1 and array2 in Fig. 3) connected to a host computer (20 in Fig. 3), wherein a first storage device (first disk in Fig. 3) included in said plurality of storage devices comprises:

- a processor (router), means for executing information processing, indicated by the received request when the received request should be executed by the first storage device (e.g. see Col.9, lines 28-51); and
- a receiver, means for receiving a request for information processing for the storage subsystem, and a transceiver, means for transferring the received request to a second storage device, are embedded in the first storage device of the system taught by Judd since first storage device of Judd's system receives the request for information processing from the host and transfers it to second storage device if it has to be executed by second storage device (e.g. see Col.9, lines 41-51).

As per claims 2 and 10, Judd discloses the claimed invention as described above and furthermore, Judd teaches that the processor (router), means for executing information processing, executes the information processing when it is judged that the received request should be executed by the first storage device, based on cooperation

control information (the first byte of the address field) which indicates a request to be executed by the first storage device or any other storage device (e.g. see Col. 9, lines 41-51).

As per claims 4 and 12, Judd discloses the claimed invention as described above and furthermore, Judd teaches that the storage subsystem wherein the second storage device (second disk in the Fig. 3) comprises:

- the processor (router), means for executing the information processing, indicated by the transferred request when the transferred request should be executed by the second storage device (e.g. see Col.9, lines 28-51); and
- the receiver, means for receiving the transferred request, is embedded in the second storage device of the system taught by Judd since second storage device of Judd's system receives the request for information processing from the first storage device if it has to be executed by second storage device (e.g. see Col.9, lines 41-51).

As per claims 6 and 14, Judd discloses the claimed invention as described above and furthermore, Judd teaches the storage subsystem, wherein the transceiver, means for transferring the received request, transfers the received request to the second storage device when it is judged that the received request should not be executed by the first storage device, based on cooperation control information which indicates a request to be executed by the second storage device (e.g. see Col. 9, lines 41-51).

As per claims 7 and 15, Judd discloses the claimed invention as described above and furthermore, Judd teaches the storage subsystem, wherein the transceiver, means

for transferring a request, transfers the received request to the second storage device when it is judged that the second storage device should execute the received request, based on cooperation control information which indicates a request to be executed by the second storage device (e.g. see Col. 9, lines 41-51).

As per claim 17, Judd teaches a storage control method which uses a storage subsystem (see Fig. 3) comprising a plurality of storage devices (array1 and array2 in Fig. 3) connected to a host computer (20 in Fig. 3) and includes a first storage device (first disk in Fig. 3), wherein the first storage device executes:

- a step for executing information processing indicated by the received request when the received request should be executed by the first storage device (e.g. see Col.9, lines 28-51); and
- a step of receiving a request for information processing for the storage subsystem, and a step of transferring the received request to a second storage device, are embedded in the first storage device of the system taught by Judd since first storage device of Judd's system receives the request for information processing from the host and transfers it to second storage device if it has to be executed by second storage device (e.g. see Col.9, lines 41-51).

As per claim 18, Judd discloses the claimed invention as described above and furthermore, Judd teaches that the step for executing information processing, executes the information processing when it is judged that the received request should be executed by the first storage device, based on cooperation control information (the first

byte of the address field) which indicates a request to be executed by the first storage device or any other storage device (e.g. see Col. 9, lines 41-51).

As per claims 20, Judd discloses the claimed invention as described above and furthermore, Judd teaches that the storage control method wherein the second storage device (second disk in the Fig. 3) executes:

- a step for executing the information processing, indicated by the transferred request when the transferred request should be executed by the second storage device (e.g. see Col. 9, lines 28-51); and
- a step for receiving the transferred request, is embedded in the second storage device of the system taught by Judd since second storage device of Judd's system receives the request for information processing from the first storage device if it has to be executed by second storage device (e.g. see Col.9, lines 41-51).

As per claim 22, Judd discloses the claimed invention as described above and furthermore, Judd teaches the storage control method, wherein the step for transferring the received request, transfers the received request to the second storage device when it is judged that the received request should not be executed by the first storage device, based on cooperation control information which indicates a request to be executed by the second storage device (e.g. see Col. 9, lines 41-51).

As per claim 23, Judd discloses the claimed invention as described above and furthermore, Judd teaches the storage subsystem, wherein the step for transferring a request, transfers the received request to the second storage device when it is judged

that the second storage device should execute the received request, based on cooperation control information which indicates a request to be executed by the second storage device (e.g. see Col. 9, lines 41-51).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3, 8, 11, 16, 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Judd et al. (USPN: 5,768,623), hereinafter, Judd in view of Sato (JPPN: 410171559A).

As per claims 3, 8, 11, 16, 19 and 24, Judd discloses the claimed invention as described above having the first identification information (the first byte of the address field) indicating a storage device that should execute the information processing, and the cooperation control information includes second identification information identifying the first storage device (e.g. see Col. 9, lines 41-51). Judd does not disclose that a processor (router), means for executing information processing, executes the information processing when the first and second identification information match. However, Sato, on the other hand, discloses that when the first and the second ID storage part match by the collation, the discrimination circuit sends out connection permission signals to a interface part. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the current invention was made to implement the

Judd's system by adding a step which will prevent the means for executing information processing from executing the information processing unless the first and second identification information matches to prevent the loss and robbery of the information sent from the host.

Allowable Subject Matter

10. Claims 5, 13 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hetul Patel whose telephone number is (703) 305-6219. The examiner can normally be reached on M-F 8-4:30.

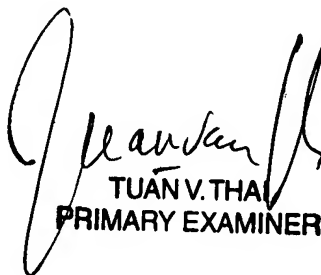
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim can be reached on (703) 305-3821. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Application/Control Number: 10/082,303
Art Unit: 2186

Page 11

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

HBP


TUAN V. THAI
PRIMARY EXAMINER